```
#include <stdio.h>

int main() {
    int n, i, j;
    int bt[20], p[20], priority[20];
    int wt[20], tat[20];
    float avg_wt = 0, avg_tat = 0;

    printf("Enter the number of processes: ");
    scanf("%d", &n);

    printf("Enter burst time and priority for each process:\n");
    for (i = 0; i < n; i++) {
        printf("Process %d:\n", i + 1);
        printf("Burst time: ");
        scanf("%d", &bt[i]);
        printf("Priority (lower number = higher priority): ");
        scanf("%d", &priority[i]);
        p[i] = i + 1; // Process number
    }

    // Sort by priority (ascending)
    for (i = 0; i < n - 1; i++) {
        for (j = i + 1; j < n; j++) {
            if (priority[i] > priority[j]) {
                // Swap burst time
                int temp = bt[i];
                bt[i] = bt[j];
```

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            bt[j] = temp;

            // Swap priority
            temp = priority[i];
            priority[i] = priority[j];
            priority[j] = temp;

            // Swap process number
            temp = p[i];
            p[i] = p[j];
            p[j] = temp;
        }
    }
}

wt[0] = 0; // First process has 0 waiting time

// Calculate waiting time
for (i = 1; i < n; i++) {
    wt[i] = 0;
    for (j = 0; j < i; j++)
        wt[i] += bt[j];
}

// Calculate turnaround time
for (i = 0; i < n; i++) {
    tat[i] = bt[i] + wt[i];
    avg_wt += wt[i];
```

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        avg_tat += tat[i];
    }

    // Display result
    printf("\nProcess\tPriority\tBurst Time\tWaiting Time\tTurnaround Time\n");
    for (i = 0; i < n; i++) {
        printf("P[%d]\t%d\t\t%d\t\t%d\t\t%d\n", p[i], priority[i], bt[i], wt[i], tat[i]);
    }

    printf("\nAverage Waiting Time = %.2f", avg_wt / n);
    printf("\nAverage Turnaround Time = %.2f\n", avg_tat / n);

    return 0;
}
```

```
Burst time: 20
Priority (lower number = higher priority): 4
Process 3:
Burst time: 30
Priority (lower number = higher priority): 4
Process 4:
Burst time: 24
Priority (lower number = higher priority): 5

Process Priority        Burst Time      Waiting Time    Turnaround Time
P[1]    3               10              0               10
P[2]    4               20              10              30
P[3]    4               30              30              60
P[4]    5               24              60              84

Average Waiting Time = 25.00
Average Turnaround Time = 46.00


...Program finished with exit code 0
Press ENTER to exit console.
```